Do we need to prescribe exercise differently for pre-and post-menopausal women?

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The article by Kretzschmar et al [1] in this issue of Menopause details a study investigating the effect of a mild-intensity aerobic exercise training program on markers of mortality risk in both pre- and post-menopausal African American women. The findings of this study showed that aerobic exercise training was successful in improving some markers of cardiovascular disease (CVD) and mortality in post-menopausal women. The premise of this study, however, does suggest that increased exercise intensity may be required in post-menopausal women as opposed to pre-menopausal women to achieve the same decreased changes in CVD markers. The outcome of the study is thus of interest to the readers of Menopause and to all those who provide health care to postmenopausal women, as it suggests that higher levels of exercise intensity or perhaps additional interventions may need to be considered in this population to further decrease mortality risk. The study therefore, has greater implications than simply the suggestion of tailoring exercise interventions generally; rather, the publication highlights the importance of prescribing exercise as medicine in a tailored fashion for women depending on their menopausal status.

The concept of exercise as medicine is a new and emerging area, and added to this; findings such as those presented in this article further enhance the importance of tailoring exercise to individuals. There is evidence to support that even small amounts of physical activity are protective against health decline in older adults. [2] Are there however, different types and intensity levels needed according to menopausal status for women, or are the effects that we see in this article related to age and/ or gender as opposed to menopausal status? The authors do note that they believe that the results may be due to the effects of menopause and not merely be an effect of ageing, as evidenced by the lack of correlation of age with most of the other measured variables. Caution does however need to be taken with the results and the authors do acknowledge that this is a pilot study on a small sample and that this does require further investigation.

Epidemiological studies have found that older women report a greater rate of 5-year decline in physical performance and are less likely to recover from disability compared with their male counterparts. [3] Further, Lin et al [4] found that (1) older women have lower levels of physical performance than older men at the age of 60 to 64 years; (2) after follow-up, older women with reduced physical performance had relatively higher trajectory stability than older men; and (3) older women with better physical activity habits seemed less likely to maintain good physical performance over time.

Moderate-intensity exercise programs have been found to improve cardiorespiratory fitness and positively modify other major risk factors for CVD in post-menopausal women. [5] These findings suggest that there is a dose-response relationship between exercise duration and numerous health outcomes in postmenopausal women, including cardiorespiratory fitness, body mass, body composition, waist circumference, and high-density lipoprotein cholesterol, [5] however unlike the present findings from this article they did not compare with a pre-menopausal group.

Individuals aged 65 and older are now the fastest growing section of the population. [6] Further, the leading causes of death in the United States are chronic, non-communicable diseases attributable to modifiable risk factors such as exercise, diet, and tobacco use. [6] Emerging evidence suggests that regular physical activity is among the most important lifestyle factors for maintaining good health into old age. [7] Lifestyle has been found to significantly predict acceleration or delay of disease in aging, as well as preservation of physical functioning. [8] Regular physical activity has also been found to mitigate the development of disability in older adults, regardless of body mass. [8]

Regular physical activity and exercise reduce body fat, increase muscle strength, improve psychological well-being, and lessen cognitive decline in older adults. [9] Physical activity has also been found to assist older adults in maintaining independent function and decreasing their risk of falls. [9] There is also evidence to suggest that physical activity may help maintain cognitive functioning throughout life especially in older age. [10] While the exact mechanisms of this protective effect are still unknown, research has explored numerous theoretical concepts on how physical activity might alter cognitive functioning. [10]

Nonetheless, the commitment to the health and wellbeing of postmenopausal women requires the availability and acceptability of health professionals to prescribe the most appropriate and rigorously tested exercise as a means of decreasing chronic disease risk factors. The questions still remain as to what extent type, intensity, and duration of activity are related to decreased chronic disease risk factors for pre- and post-menopausal women; however the results of this pilot study suggest that further research is important and should be continued.

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